Title: Health Utility in Patients Following Cardiovascular Events

Authors: Rhys D. Pockett, Phil McEwan, Clodagh Beckham, Simon Shutler, Steven Martin, Zaheer Yousef, Ameet Bakhai

Introduction: Cardiovascular (CV) disease is a major contributor to morbidity and mortality in the UK. Health-related quality of life (HRQoL) data is an important requirement of the development process and is used to inform the health state utilities within economic models.

Methods: EuroQol-5 dimension (EQ-5D) surveys were sent to patients (age ≥18 years) from three centres in the UK (Barnet, Cardiff, Peterborough) 1 month following hospital admission for a myocardial infarction (MI), unstable angina (UA) or stroke. Patient demographics, lifestyle and baseline utility score were collected in the first survey. Follow-up surveys were sent at 6, 12, 18 and 24 months capturing utility and subsequent health events. Descriptive statistics and general linear regression models were used to describe the patients and to identify changes in utility over time.

Results: 1350 patients (mean age 68.8 years; SD 12.3) were recruited. Of these, 755 (55.9%) suffered a MI, 571 (42.3%) had UA, and 24 (1.8%) had a stroke; 345 (25.6%) patients also had diabetes. Baseline utilities were 0.690 (SD 0.322) in patients with a MI and 0.623 (SD 0.322) in patients with UA. Using regression, mean utility was 0.767 (MI) and 0.724 (UA) at 1 month, changing to 0.846 (MI) and 0.807 (UA) at 6 months, 0.877 (MI) and 0.845 (UA) at 12 months, 0.855 (MI) and 0.841 (UA) at 18 months, and 0.885 (MI) and 0.836 (UA) at 24 months. Diabetes was associated with a decrement of 0.106, 0.046, 0.074, 0.076 and 0.059 at 1, 6, 12, 18 and 24 months, respectively.

Conclusion: In this prospective, robustly conducted study with good follow up, HRQoL associated with CV events appeared to improve in the 6 months post-event. However, over the next 18 months HRQoL plateaued with little to no improvement in this time period. Diabetic patients had lower scores at each timepoint.

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